U.S. Serial No. 09/581,772

IN THE CLAIMS:

1. (Currently Amended) A microparticle comprising: a polymer selected from the group consisting of a poly(α-hydroxy acid), a polyhydroxy butyric acid, a polycaprolactone, a polyorthoester, a polyanhydride, and a polycyanoacrylate; a detergent selected from a cationic detergent and an anionic detergent; and an antigen adsorbed on the surface of said microparticle,

wherein said microparticle is formed by a process that comprises: forming a microparticle comprising said polymer and said detergent, said microparticle being formed in the presence of said detergent; and exposing said microparticle to said antigen.

2. (Previously Amended) The microparticle of claim 1, wherein said antigen is selected from an antigen comprising a polypeptide and an antigen comprising a polynucleotide.

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3. (Previously Amended) The microparticle of claim 1, further comprising an additional biologically active macromolecule encapsulated within said microparticle, wherein the additional biologically active macromolecule is selected from a polypeptide, a polynucleotide, a polynucleoside, an antigen, a hormone, an enzyme, and an immunological adjuvant.

4. (Previously Amended) The microparticle of claim 1, wherein the poly(α-hydroxy acid) is selected from poly(L-lactide), poly(D,L-lactide) and poly(D,L-lactide-co-glycolide).

5. (Previously Amended) The microparticle of claim 1, wherein the polymer is poly(D,L-lactide-co-glycolide).

6. (Previously Amended) The microparticle of claim 1, wherein the detergent is a cationic detergent.

7. (Previously Amended) The microparticle of claim 1, wherein the detergent is an anionic detergent.

8. (Cancelled)

9. (Currently Amended) The microparticle of claim 1, wherein the antigen is selected from an HIV gp120 antigen, an HIV gp160 antigen, an HIV p24gag antigen, an HIV p55gag antigen, and ~~a~~ an Influenza A hemagglutinin antigen.

10. (Previously Amended) The microparticle of claim 1, wherein the antigen comprises a polynucleotide which encodes an HIV gp120 antigen.

11. (Previously Amended) The microparticle of claim 3, wherein the additional biologically active macromolecule is an immunological adjuvant.

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12. (Previously Amended) The microparticle of claim 11, wherein the immunological adjuvant is an aluminum salt.

13. (Previously Amended) A microparticle composition comprising a microparticle of any of claims 1-7 and 9-12 and a pharmaceutically acceptable excipient.

14. (Previously Amended) A microparticle composition comprising a microparticle according to any of claims 1, 2, 4-7, 9 and 10, a pharmaceutically acceptable excipient, and an immunological adjuvant.

15. (Previously Amended) A microparticle composition of claim 14, wherein the immunological adjuvant is selected from CpG oligonucleotides, E. coli heat-labile toxin-K63 (LTK63), E. coli heat-labile toxin-R72 (LTR72), monophosphorylipid A (MPL), and an aluminum salt.

16. (Previously Amended) A microparticle composition of claim 15, wherein the aluminum salt is aluminum phosphate.

17-42. (Canceled).

43. (Currently Amended) A microparticle comprising: a biodegradable polymer; a detergent selected from a cationic detergent and an anionic detergent; and an antigen adsorbed on the surface of said microparticle,

wherein said microparticle is formed by a process that comprises: forming a microparticle comprising said polymer and said detergent, said microparticle being formed in the presence of said detergent; and exposing said microparticle to said antigen.

44. (Previously Amended) The microparticle of claim 43, wherein said antigen is selected from an antigen comprising a polypeptide and an antigen comprising a polynucleotide.

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45. (Previously Amended) The microparticle of claim 44, further comprising an additional biologically active macromolecule encapsulated within said microparticle, wherein the additional biologically active macromolecule is selected from a polypeptide, a polynucleotide, a polynucleoside, an antigen, a hormone, an enzyme, and an immunological adjuvant.

46. (Previously Amended) A microparticle composition comprising a microparticle of any of claims 43-45 and a pharmaceutically acceptable excipient.

47. (Previously Amended) A microparticle composition comprising a microparticle according to any of claims 43 and 44, a pharmaceutically acceptable excipient, and an immunological adjuvant.

48-51. (Canceled).

52. (Previously Amended) The microparticle of any of claims 1, 3, 4, 5, 6, 7 and 11, wherein the antigen comprises a polypeptide.

53. (Previously Amended) The microparticle of claim 52, wherein the polypeptide is selected from HIV polypeptides, hepatitis B virus polypeptides, hepatitis C virus polypeptides, *Haemophilus influenza* type B polypeptides, pertussis polypeptides, diphtheria polypeptides, tetanus polypeptides, and influenza A virus polypeptides.

54. (Previously Amended) The microparticle of any of claims 1, 3, 4, 5, 6, 7 and 11, wherein the antigen comprises a polynucleotide.

55. (Canceled).

56. (Previously Amended) The microparticle of claim 54, wherein the antigen comprises a plasmid DNA molecule.

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57. (Previously Amended) The microparticle of claim 54, wherein the polynucleotide encodes a polypeptide selected from HIV polypeptides, hepatitis B virus polypeptides, hepatitis C virus polypeptides, *Haemophilus influenza* type B polypeptides, pertussis polypeptides, diphtheria polypeptides, tetanus polypeptides, and influenza A virus polypeptides.

58. (Previously Added) The microparticle of claim 6, wherein the cationic detergent is hexadecyltrimethylammonium bromide.

59. (Previously Added) The microparticle of claim 7, wherein the anionic detergent is sodium dodecyl sulfate.

60-68. (Canceled).

69. (Previously added) The microparticle of any of claims 1, 2, 3, 4, 5, 6, 7 and 11, wherein said antigen is not entrapped within said microparticle.

70. (Currently Amended) The microparticle of any of claims 1, 2, 3, 4, 5, 6, 7 and 11, wherein said microparticle is formed ~~detergent is incorporated into said microparticle~~ in a double emulsion process.

71. (Previously added) The microparticle of any of claims 1, 2, 3, 4, 5, 6, 7 and 11, wherein said antigen is derived from a pathogenic organism.

72. (Previously added) The microparticle of claim 71, wherein said pathogenic organism is a bacterium.

73. (Currently Amended) The microparticle of claim 71, wherein said pathogenic ~~antigen~~ organism is a virus.

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74. (Previously added) The microparticle of any of claims 1, 2, 3, 4, 5, 6, 7 and 11, wherein said antigen is selected from HIV antigens, hepatitis B virus antigens, hepatitis C virus antigens, *Haemophilus influenza* type B antigens, pertussis antigens, diphtheria antigens, tetanus antigens and influenza A virus antigens.

75. (Previously added). The microparticle of any of claims 1, 2, 3, 4, 5, 6 and 11, wherein the antigen is a negatively charged antigen.

76. (Previously added) The microparticle of any of claims 1, 2, 3, 4, 5, 7 and 11, wherein the antigen is a positively charged antigen.

77. (Previously added) The microparticle of any of claims 1, 2, 3, 4, 5, 6, 7 and 11, wherein the microparticle has a diameter between 500 nanometers and 10 microns.

78. (Previously added) The microparticle of any of claims 2, 3, 6, 7, and 11, wherein the polymer is poly(D,L-lactide-co-glycolide).

79. (Previously added) The microparticle composition of claim 13, wherein said microparticle composition is an injectable composition.

80. (Previously added) The microparticle composition of claim 14, wherein said microparticle composition is an injectable composition.

81. (Previously added) A microparticle composition comprising a microparticle of claim 52 and a pharmaceutically acceptable excipient.

82. (Previously added) The microparticle composition of claim 81, wherein said microparticle composition is an injectable composition.

83. (Previously added) A microparticle composition comprising a microparticle of claim 53 and a pharmaceutically acceptable excipient.

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84. (Previously added) The microparticle composition of claim 83, wherein said microparticle composition is an injectable composition.

85. (Previously added) A microparticle composition comprising a microparticle of claim 54 and a pharmaceutically acceptable excipient.

86. (Previously added) The microparticle composition of claim 85, wherein said microparticle composition is an injectable composition.

87. (Previously added) A microparticle composition comprising a microparticle of claim 57 and a pharmaceutically acceptable excipient.

88. (Previously added) The microparticle composition of claim 87, wherein said microparticle composition is an injectable composition.

89. (Previously added) A microparticle composition comprising a microparticle of claim 71 and a pharmaceutically acceptable excipient.

90. (Previously added) The microparticle composition of claim 89, wherein said microparticle composition is an injectable composition.

91. (Newly added) The microparticle of any of claims 1, 2, 3, 4, 5, 6, 7 and 11, wherein said antigen is a tumor antigen.

92. (Newly added) A microparticle composition comprising a microparticle of claim 91 and a pharmaceutically acceptable excipient.

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93. (Newly added) The microparticle composition of claim 92, wherein said microparticle composition is an injectable composition.

94. (Newly added) A method of raising an immune response, comprising: providing the microparticle composition of claim 13, and administering said microparticle composition to a vertebrate animal.

95. (Newly added) A method of raising an immune response, comprising: providing the microparticle composition of claim 14, and administering said microparticle composition to a vertebrate animal.

96. (Newly added) A method of raising an immune response, comprising: providing the microparticle composition of claim 46, and administering said microparticle composition to a vertebrate animal.

97. (Newly added) A method of raising an immune response, comprising: providing the microparticle composition of claim 47, and administering said microparticle composition to a vertebrate animal.

98. (Newly added) A method of raising an immune response, comprising: providing the microparticle composition of claim 81, and administering said microparticle composition to a vertebrate animal.

99. (Newly added) A method of raising an immune response, comprising: providing the microparticle composition of claim 83, and administering said microparticle composition to a vertebrate animal.

100. (Newly added) A method of raising an immune response, comprising: providing the microparticle composition of claim 85, and administering said microparticle composition to a vertebrate animal.

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101. (Newly added) A method of raising an immune response, comprising: providing the microparticle composition of claim 87, and administering said microparticle composition to a vertebrate animal.

102. (Newly added) A method of raising an immune response, comprising: providing the microparticle composition of claim 89, and administering said microparticle composition to a vertebrate animal.

103. (Newly added) A method of raising an immune response, comprising: providing the microparticle composition of claim 92, and administering said microparticle composition to a vertebrate animal.